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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,572

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Oliver Voelckers

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NORRIS, MCLAUGHLIN & MARCUS, P.A.
875 THIRD AVE
18TH FLOOR
NEW YORK, NY 10022

EXAMINER

FRIEDHOFFER, MICHAEL A

ART UNIT

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2832

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,572	Applicant(s) VOELCKERS, OLIVER	
	Examiner Michael A. Friedhofer	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/4/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2 “this level” has no antecedent basis.

In claim 1, line 4 “the motions” has no antecedent basis.

In claim 1, line 6 “the basis” has no antecedent basis.

In claim 1, line 9 “the position” has no antecedent basis.

In claim 14, line 2 “the base plate” has no antecedent basis.

In claim 17, line 2 the phrase “i.e.” creates a limitation within a limitation making the claim indefinite.

In claim 17, line 2 “the base plate” has no antecedent basis.

In claim 17, line 6 prior to “corresponding” delete –the--.

In claim 18, line 2 “the base plate” has no antecedent basis.

In claim 18, line 3 “the convex calotte” has no antecedent basis.

In claim 18, line 4 “the base plate” has no antecedent basis.

In claim 18, line 6 “the actuation” has no antecedent basis.

In claim 18, line 7 “the calotte” has no antecedent basis.

In claim 20, line 3 it is unclear whether this contact matrix is the same as the one previously claimed.

In claim 21, lines 2-3 “the scanning unit” has no antecedent basis.

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In claim 21, line 3 “the bits” has no antecedent basis.

In claim 21, line 3 it is unclear whether this contact matrix is the same as the one previously claimed.

In claim 21, line 4 “the number” and “the flattening” have no antecedent basis.

In claim 22, lines 2-3 “the scanning unit” has no antecedent basis.

In claim 22, line 3 “the bits” has no antecedent basis.

In claim 22, line 3 it is unclear whether this contact matrix is the same as the one previously claimed.

In claim 22, line 4 “the spatial positions” has no antecedent basis.

In claim 23, line 2 “the calotte” has no antecedent basis.

In claim 23, line 2 it is unclear whether this input element and these contacts are related to the ones previously claimed.

In claim 23, lines 2-3 it is unclear whether this contact matrix is related to the one previously claimed.

In claim 23, line 3 “the controller” has no antecedent basis.

In claim 24, line 2 “the calotte” has no antecedent basis.

In claim 24, line 2 it is unclear whether this input element and this contact matrix are related to the ones already claimed.

In claim 25, line 2 it is unclear whether these input elements are related to the input element already claimed.

In claim 25, line 4 “the underside” has no antecedent basis.

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In claim 25, line 5 it is unclear whether this contact matrix is related to the one previously claimed.

In claim 26, line 3 “the contact medium calotte” has no antecedent basis.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,5,9, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Burton.

Burton discloses in the figures a device for detecting a mechanical actuation of an input element, that is spring-suspended in one plane and is from this level actuatable both in a vertical direction as well as in a direction that is diagonal to the vertical at a specified angle to the vertical axis, comprising a switch element 209 converting the motions subjection onto the input element 200 into electrical, digital signals, and a control module (not shown) working on the basis of pattern recognition that translates the electrical signals supplied from the switch element are provided, wherein the switch element exhibits a multitude of contact pairs (206,207) of the contact matrix formed by the switch element 209 that can be closed arbitrarily depending on the position of the input element. The contact

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matrix exhibits the multitude of contacts along one axis. The contacts of the contact matrix are arranged in pairs of alternating sequence. The input element 200 and the casing 203 exhibit flexible characteristics constituting a constructive unit.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,3,6-8,10,11,13,19,20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burton in view of DeVolpi ('325).

Burton discloses all of the claimed limitations with the exception of the input element exhibiting a calotte on its underside with a contact coating on the convex surface of the calotte opposite to the underside of the input element and that the input element is a joystick with a contact matrix that extends in two dimensions. DeVolpi teaches a joystick teaches in the figures an input element 51; a calotte 54 having an electrically conductive contact coating on its convex surfaces opposite to the underside of the joystick for contact a switch element 39 formed of a contact pattern. A control module (not shown) works on the basis of pattern recognition that translates the electrical signals supplied from the switch element. The contact matrix exhibits a two-dimensional contact allocation. The calotte exhibits a circular shape. The contacts are arranged coaxial to one another. A

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scanning unit (not shown) checks the rows and columns of the contact matrix to an electrical connection and an arbitrary combination of contacts of the contact matrix may be connected and the scanning unit generates a bit pattern from these checks that is transmitted to a pattern recognition unit for further processing. A pattern recognition unit (not shown) interprets the bit pattern received from the scanning unit, the bits representing closed contacts of the contact matrix, in a way that an arithmetical average is derived from the spatial position of the closed contacts and the tilt of the input element along an axis is derived from this result.

It would have been obvious to one of ordinary skill in the art to apply the teachings of DeVolpi ('325) to Burton form the input element as a joystick for operating a contact matrix which extends in alternating patterns along two dimensions with a flexible calotte formed on the underside of the input element with the conductive surface for engaging the contact matrix because forming the input element as a joystick with two dimensional matrix allows for greater operations being able to be performed while the flexible calotte enables the circuitry to interpret the amount of pressure being applied to the input element. As for the pattern of the matrix being in alternating coaxial sequence or in a cross-over sequence is a matter of engineering design choice not affecting the purpose or function of the input element in which any known pattern of contacts may be utilized to perform the operation, so long as, the input element bridges the contact pairs.

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5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burton in view of May et al.

Burton discloses all of the claimed limitations with the exception of the base plate being equipped with a software controlled electro magnet, delivering a tactile feedback to the actuation status of the input element.

May et al teaches an input element operated in multiple directions in which a software controlled electro magnet delivers tactile feedback to the actuation status of the input element.

It would have been obvious to one of ordinary skill in the art to apply the teachings of May et al to Burton to include a software controlled electro magnet for providing tactile feedback because this is for the purpose of indicating the operation of the switch to the operator and that the action has been accepted.

Allowable Subject Matter

6. Claims 12, 14, 17, 18, 21, 21, and 24-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakayama et al, Franz et al, Ono et al, Strauch et al, Chang, DeVolpi ('034), Ihalainen, and Pihlaja et al teach various input elements operable in a plurality of directions for operating a contact matrix.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Friedhofer whose telephone number is 571-272-1992. The examiner can normally be reached on Mon-Fri 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael A. Friedhofer
Primary Examiner
Art Unit 2832

/Michael A. Friedhofer/
Primary Examiner, Art Unit 2832